



State of New Jersey Office of the Attorney General Division of Elections

## DIA Integration Plan for the Statewide Voter Registration System (SVRS)

# NEW JERSEY

### Deliverable SVRS 030

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04/11/2005	0.1	Initial Draft	Gary L. Bush
05/30/2005	0.2	Add Initial DIA File Layouts	Gary L. Bush
06/08/2005	0.3	Add DIA Plan Specifics & Decision Matrix	Gary L. Bush
06/20/2005	1.0	Modifications To Staff Recommendation Related To MVC Portion Of Document	Gary L. Bush

## Table of Contents

<b>1.0</b>	<b>Introduction</b>	<b>1</b>
	DIA Plan Overview.....	1
	The DIA's .....	1
	Best Source of Information.....	2
	Needed Decisions .....	2
	Election <i>Net</i> Server Interface.....	3
	Data Integrity & Quality.....	3
	The Interface Platform.....	4
	The DIA Plan - A Living Document by Nature .....	4
<b>2.0</b>	<b>Participating DIA Specifics</b>	<b>5</b>
	Motor Vehicle Commission (MVC) .....	5
	Department of Health and Senior Services (DHSS) .....	5
	Department Corrections (DOC).....	6
	Administrative Office of the Courts (AOC).....	6
<b>3.0</b>	<b>The DIA Planning Process</b>	<b>7</b>
	The Team.....	7
	Needed State Staffing .....	8
	DIA Interface Tasks and Schedule.....	9
<b>4.0</b>	<b>Appendices</b>	<b>10</b>
	Appendix A – DoC Batch File Specifications and Layout .....	11
	Appendix B – HHS Batch File Specifications and Layout.....	12
	Appendix C – State Parole Batch File Specifications and Layout .....	13
	Appendix D – AOC Batch File Specifications and Layout .....	14

## 1.0 INTRODUCTION

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### DIA Plan Overview

This plan will construct the foundation necessary for the integration of New Jersey Direct Impact Agencies (DIAs) with the SVRS and thus provide the technological avenue for the sharing of HAVA required information in a timely and secure manner. Such DIA information will be used by the SVRS for the disqualification of existing voters and denial of would-be registrants that do not meet HAVA voter registration criteria.

From a planning view, this deliverable identifies and thus sets forth the following elements of the DIA integration effort

- Identifies the DIA's
- Identifies the "best source" DIA of a given set of data
- Poses Questions that must be answered prior to actual design and programming
- Provides a high view of **ElectionNet's** External Interface Server and Processes
- Establishes a calendar to coincide with the SVRS Project
- Provides DIA Integration Options
- Offers Recommendations for DIA with optional participation methods on which to build
- Sets forth base DIA File Layout Specifications

### The DIA's

As of this writing, DIAs targeted as a source for information sharing with SVRS and as well, the interface method for each respective DIA is listed below:

- Motor Vehicle Commission (MVC)
  - On-line for operational registrant disqualification check
- Department of Health and Senior Services (DHSS)
  - Batch - operational registrant disqualification check
- Department of Corrections (DOC)
  - Batch - operational registrant disqualification check
- State Parole Board
  - Batch - operational registrant disqualification check
- Administrative Office of the Courts (AOC)
  - Batch - operational registrant disqualification check

To accommodate the aforementioned integration, the various file layouts associated with same are included as Appendices to this document and will be amended as necessary to accommodate the needs of both SVRS and the source agencies.

Initial detail associated with the various DIA integration options and as well, specifics related to the respective DIA contribution to the SVRS may be found in Section 2 of this document. Also included in

the aforementioned Section 2 are **recommendations** for the integration options related to method of interface and record subject match criteria. However, it should be noted that the following section related to “Needed Decisions” must be addressed as per the listed timelines so that this plan might be amended accordingly. Without such direction, the effort will flounder and thus consume valuable project cycles.

## Best Source of Information

False positives lead to distrust of the application, often require valuable work cycles to rectify and most importantly, may cause a citizen to be improperly denied the ability to register. One element in the reduction of false positives requires that non-source and/or questionable information refrain from being introduced into the match/no match rule based process. An example of such information is Drivers License Number (DLN); While DLN may be sporadically captured in a system other than the issuer of the DLN, the actual primary hit designation or match without additional validation of a DLN should be limited to the agency of authority. DLN residing in other files however may and should be considered as a secondary “hit” (other validation factors are needed) not as a primary simply because a DLN happens to be resident in an issuing database. The below depicted “Best Source” Matrix displays the traditionally used elements that are employed as primary match criteria and the agency of authority for same.

*Best Source of Information Matrix*

VALUE #	VALUE	HHS	MVC	DOC	PAROLE	AOC
1	First Name	S	S	S	S	S
2	Middle Name/Initial	S	S	S	S	S
3	Last Name	S	S	S	S	S
4	DOB	S	S	S	S	S
5	SSN	V	V	V	V	V
6	Drivers License Number	V	S	V	V	V

**Legend**

**S = Considered as Source Agency**

**V = Secondary Validation Value**

## Needed Decisions

Prior to actual design and programming, various preliminary, high-level policy and operational decisions must be made to ensure that a harmonious marriage of both the technical architecture and the functional requirements of the DIA effort are accomplished as per the NJ SVRS project schedule. In order to

facilitate and further time-box this process to guarantee congruence with the project schedule, the below depicted matrix sets forth such decision parameters and the needed resolution date to accommodate the overall NJ SVRS schedule.

***“Needed Decisions” Critical Path Matrix***

#	RELATES TO	NEEDED DECISION	DATE NEEDED
1	On-line MVC “Voter Check”	Define Match Criteria	6/23/2005
2	On-line MVC “Voter Check”	Will Soundex be employed on-line	6/23/2005
3	On-line MVC “Voter Check”	Will the MVC response return possible matches or a Yes/No?	6/23/2005
4	DIA (AOC/DOC/VS/P&P/) Batch File	Define Match Criteria...It is assumed that response <b>will</b> return possible matches for review by Election Staff	6/23/2005

Since technical and/or operational options exist for a number of the DIA elements as to the method and manner by which a given interface might be accomplished, as companion to the Critical Path Decision Matrix, recommendations outlining the most feasible option for a given integration are offered by Covansys and so noted within the specific DIA Section (Section 2) contained herein.

## **ElectionNet Server Interface**

From a high view, interfaces to and with DIAs will be supported via **ElectionNet’s** External Interface Server and Processes (EIS). While the **ElectionNet** EIS supports various industry standard data formats including XML, CSV delimited and tabbed files, Section 2 of this document, sets forth such data interface options and field attributes related to the respective DIA and as well, the file layouts associated therewith are contained in the Appendices to this deliverable.

## **Security**

While the security model of **ElectionNet’s** EIS supports integration with LDAP and other standard security protocols to comply with New Jersey security standards, “out of the box” EIS processes have been developed to effectively handle various external interfaces in batch and or real-time mode. As the EIS supports WebSphere MQ (and as well similar message broker technology) for guaranteed delivery of data from and to ElectionNet. XML and delimited data formats are natively supported. While batch data transfers from the DIA’s will be accomplished via transfer to a secure FTP site, WebSphere MQ Server Edition will be employed to accomplish a secure on-line transport between SVRS and MVC.

## **Data Integrity & Quality**

The **ElectionNet** External Interface Engine, processes, and business logic provide specific reports, reminder screens and automated processes to provide appropriate measures to ensure data integrity and quality.

- Key features of the External Interface Module include:

- A Graphical User Interface (GUI) administration front-end that facilitate transaction setup and scheduling
- A reporting interface to view transaction status and error logs
- A facility to host transaction specific business logic
- Export and Import Utility to support XML (see sample below), ODBC, JDBC, CSV and Tab Delimited formats
- A robust interface processing environment
- A centralized management console that provide scheduling and tracking of external interfaces across various agencies
- Highly secure; Supports LDAP and other industry standard security protocols
- Supports a wide variety of interface including MQ, FTP and socket client
- Extensible audit report for Batch Jobs
- Easy to maintain

## The Interface Platform

External interface servers will be used to interface with the DIA systems and to support the County backup solution. These servers will act as the middle component to synchronize and replicate to the local county servers.

External Interface Server		
	Recommended Configuration	Minimum Configuration
Model	Dell PowerEdge 2850	Dell PowerEdge 2850
Processor	2 x 3.2 GHz Xeon Processors	2 x 2.4 GHz Xeon Processors
RAM	4 GB DDR RAM	4 GB DDR RAM
Storage	5 x 73 GB SCSI HDD 2 drives: RAID-1 (Operating System) 3 drives: RAID-5 (Data)	5 x 73 GB SCSI HDD 2 drives: RAID-1 (Operating System) 3 drives: RAID-5 (Data)

## The DIA Plan - A Living Document by Nature

As with any document generated early in the project lifecycle that relies on analysis of evolving requirements and subsequent development of corresponding internal and external policy, this plan must be living by nature to be of benefit to both the State and Covansys. While this deliverable is the initial plan that casts the foundation for moving into the action phase of the DIA effort, this document will be affected and thus modified to reflect the evolution of business requirements, resulting technical adaptations, development of procedures, and corresponding policy developments.

## 2.0 PARTICIPATING DIA SPECIFICS

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### Motor Vehicle Commission (MVC)

From a broad view and contingent upon the State requirements, the **ElectionNet** external MVC interface can support either batch or online processes to provide SVRS with notations of possible disqualifications.

Listed below are the options that are available for providing SVRS with the needed information from MVC:

#### ***On-Line Match Process***

If the online option is selected by the State, (see question number 6 in Critical Decisions Matrix), the Election Official will spawn a real-time transaction to MVC. Contingent upon whether the State decides to opt for return to the user possible matches vs. a Yes/No response, a manual user initiated may be required as catalysts transmission of request to SSA.

#### ***DIA Team Recommendation For MVC***

It is the recommendation of Covansys staff responsible for the DIA processes that the on-line MVC match process be accepted by the State and decisions related to that process be made with the utmost urgency. And as related to return criteria from the MVC on-line interface, should the query to MVC be a “match”, the response from MVC to SVRS will return the “matched” information for review by local election staff to validate the match condition. Both “send & receive” formats from and to SVRS to MVC will be formatted in such a manner to meet MVC required message block formatting standards.

### Department of Health and Senior Services (DHSS)

The purpose of interfacing with the DHSS (Vital Records/Death File) is to eliminate (automatically) any in-state voters that are identified as deceased. As previously agreed, DHSS staff will export on a monthly basis that information contained in Appendix B from the DHSS system. This data will be extracted as delimited ASCII files. The delimited files data streams will be fed into SVRS via External Interface Server. The ElectionNet business logic will run a match between vital records extract and voter registration database. Exact matches will be flagged for purge/delete.

A list of these records will be available to the appropriate counties reminder screen. Once the county confirms these matches, the records will be eliminated from the voter registration database in accordance with NVRA. The history and audit trail is maintained and also be available for the users to confirm and process the purge manually.

The interface supports monthly runs. In addition to the regular run, we also recommend that this process also be run before an election. This interface will be configured to meet those technical and business decisions made by the State of New Jersey

***DIA Team Recommendation For DHSS***

While the Batch Process will be used to accomplish this integration it is the recommendation of Covansys staff responsible for the DIA processes that the match criteria against this file be the following:

***Soundex Last Name, Soundex First Name, with accompanying match of DOB or SSN***

**Department Corrections (DOC)**

The purpose of interfacing with the Department of Corrections (DOC) and Administrative Office of the Courts (AOC) database is to suspend (automatically) a citizen's voting rights if he or she is identified as a felon or on probation or on parole. A custom job will be written to extract first name, middle name, last name, address, SSN (if available), birth date, prison term, prison start date, prison end date, probation date, parole end date, citizenship indicator (if available), driver's license number (if available) and gender indicator (if available) from the DOC system.

This data will be extracted as delimited files. The delimited files will be fed into SVRS via the External Interface Server. *Electionet* business logic will run a match between vital records extract and voter registration database. Matches as defined will be flagged for suspension. A list of these records will be available to the appropriate county's reminder screen. Once the county confirms these matches, the records will be suspended in accordance the State of New Jersey statutes. The history and audit trail is maintained and appropriate correspondence/letters are printed. A separate no match and partial match list will also available for the counties to confirm and process the suspension manually.

The interface supports monthly runs. In addition to the regular run, we also recommend that this process also be run before an election. This interface will be configured to meet those technical and business decisions made by the State of New Jersey

***DIA Team Recommendation For DoC***

While the Batch Process will be used to accomplish this integration it is the recommendation of Covansys staff responsible for the DIA processes that the match criteria against this file be the following:

***Soundex Last Name, Soundex First Name, with accompanying match to DOB or SSN or DLN  
A second level match should be preformed using SBI# to uncover aliases should positives be returned as a result of the primary match effort.***

**Administrative Office of the Courts (AOC)**

The purpose of the Batch file interface with AOC is to suspend (automatically) a citizen's voting rights if he or she is identified as a felon. AOC Staff will extract from the AOC System that information noted in Appendix C.

This data will be extracted as delimited files. The delimited files will be fed into SVRS via the External Interface Server. *Electionet* business logic will run a match between AOC records extract and voter registration database. Matches as defined will be flagged for suspension. A list of these records will be

available to the appropriate county's reminder screen. Once the county confirms these matches, the records will be suspended in accordance the State of New Jersey statutes. The history and audit trail is maintained and appropriate correspondence/letters are printed.

The interface supports monthly runs against the AOC extract. In addition to the regular run, we also recommend that this process be run before an election. This interface will be configured to meet those technical and business decisions made by the State of New Jersey.

### ***DIA Team Recommendation For AOC***

While the Batch Process will be used to accomplish this integration it is the recommendation of Covansys staff responsible for the DIA processes that the match criteria against this file be the following:

***Soundex Last Name, Soundex First Name, with accompanying match to DOB or SSN or DLN  
A second level match should be preformed using SBI# to uncover aliases should positives be returned as a result of the primary match effort.***

## **3.0 THE DIA PLANNING PROCESS**

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A collaborative approach will be use to ensure that the DIA Interfaces are designed, developed and deployed with full guidance from the state and DIA agencies. To date, the design phase has included DIA agency specific JAD (Joint Application Design) sessions. The results of the aforementioned sessions and as well future tasks are now being addressed and will result in the development of the DIA Interface Design Deliverable. However, future meetings and sessions must receive continued support and participation from each affected agency since input from respective participants will be used to complete DIA Agency Interface maps that ensure data and process into NJSVRS. Once the design sessions are conducted for each DIA Interface the final results will be documented and the DIA Interface Design Deliverable will be updated accordingly. Each DIA agency will be required to review these documents and a sign-off will be required from each participant agency.

During the development phase, regular meetings will be conducted with each DIA agency and unit and integration test reports will be provided to each DIA agency for resolution. User acceptance testing will be conducted in collaboration with each DIA agency such that both DIA agency side data feeds and integration of data with in SVRS is successfully tested and all the interfaces finalized to meet the State requirements.

### **The Team**

The SVRS Team has hands on experience in deploying a statewide, HAVA compliant Voter Registration system that is similar in size and scope to the State of New Jersey. The SVRS Team includes former State election officials experienced in implementing a State wide centralized voter registration system.

## **Needed State Staffing**

During the design phase State resources will assist during the design sessions and design document review. State resources include SVRS subject matter experts, DIA personnel and State IT personnel. Covansys also recommends that one or two counties are also involved for input during the design sessions.

During the development phase State resources will be utilized on as needed basis. No county personnel will be utilized during this phase.

During the testing and deployment phase State resources and county resources will be involved for user acceptance testing, training and making sure that DIA data feeds area operational, as expected.

## DIA Interface Tasks and Schedule

As contained in the amended *Master SVRS Project Plan*, below are the tasks and modified time-line dates (start/end) associated with DIA Interface processes that lead to implementation.

Task	Start	End
<b>P7b - Interface</b>	Tue 3/15/05	Tue 10/4/05
<b>P7b1 - External Interface Design Document</b>	Tue 3/15/05	Thu 6/29/05
P7b1-Conduct Integration JAD Sessions with Relevant Parties	Tue 3/15/05	Mon 3/28/05
P7b1-Prepare High-level Data Flow Diagrams for Interfaces	Tue 3/29/05	Mon 4/11/05
P7b1-Prepare External Interface Integration Design Document	Tue 5/31/05	Mon 6/16/05
P7b1-Distribute/Review/Revise with Key Stakeholders	Tue 6/21/05	Thu 6/24/05
P7b1-Review/Submit/Obtain Signoff of External Interface Design Document	Fri 6/27/05	Thu 6/29/05
<b>P7b2 Interface testing results document</b>	Fri 5/20/05	Tue 10/4/05
P7b2 - External Interface Development	Fri 7/05/05	Tue 8/05/05
P7b2-Conduct Internal Testing (Interface, Integration)	Tue 8/05/05	Tue 8/18/05
P7b2-Document Internal Testing	Wed 8/18/05	Tue 08/20/05

## **4.0 APPENDICIES**

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## Appendix A – DoC Batch File Specifications and Layout

### General File Creation Specifications

1. Filters
  - 1.1. All Active Offenders
  - 1.2. All Escaped Offenders
  - 1.3. Alias information, noted by the SBI, will be included
2. Oracle File Format
3. Regenerate total file each submission (Not an update)

### File Submission Specifications

1. Monthly
2. Method – Batch
3. Transport – FTP to Secure Site
  - 3.1. FTP path is <ftp://col-dceftp/HAVA/NJHAVA/>
  - 3.2. Login(s) provided under separate email.

Data	Max Field Length	Format	Description	Default	CVNS USE ONLY
Status	12				
SBI #	10				
Last Name	30	Alpha			
First Name	30	Alpha			
Middle Name	30	Alpha			
DOB	9				
Other ID Type	12				SSN or DL Type
Identifier	20	A/N			SSN or DL #
<b>File Length</b>	<b>153</b>				

#### Notes:

- This is a listing of active offenders and those who have escaped or died. The escape must be the most recent "movement". Naturally, death is.
- There is a different record for each alias, which is unique by name and date of birth.
- Where multiple SSNs exist, there will be one record for each SSN even if the names are the same.
- Excluded from the listing are juvenile offenders, and offenders with dismissed or vacated sentences.

## Appendix B – HHS Batch File Specifications and Layout

### *General File Creation Specifications*

4. Filters
  - 4.1. Non-New Jersey Deaths (Not to be included)
  - 4.2.  $\geq 18$  YOA as of Date Of Death
  - 4.3. Include blank/missing/defaulted DOD's
5. Delimiter - Standard CSV - Comma(,) with " " enclosing address information
6. Regenerate total file each submission (Not an update)

### *File Submission Specifications*

4. Monthly
5. Method – Batch
6. Transport – FTP to Secure Site

Data	Max Field Length	Format	Description	Default	CVNS USE ONLY
File #	11	A/N			New Data
SSN	9	NNNNNNNNNN			
Date of Birth	8	MM/DD/YYYY			
First Name	50	Alpha			
Middle Name	50	Alpha			
Last Name	50	Alpha			
Street Address	60	A/N			
City	40	Alpha			
State	2	Alpha			
Zip5	5	NNNNN			
Zip4	4	NNNN			
Municipality	40	A/N			New Data
County	20	A/N			
Date of Death	8	MM/DD/YYYY			
Amended Date	8	MM/DD/YYYY			New Data

## Appendix C – State Parole Batch File Specifications and Layout

### *General File Creation Specifications*

7. Filters
  - 7.1. All Active Clients –
    - 7.1.1. Includes return PV's
    - 7.2. Alias information, noted by the SBI, will be included
8. Delimiter - Standard CSV - Comma(,) with " " enclosing address information
9. Regenerate total file each submission (Not an update)

### *File Submission Specifications*

7. Monthly
8. Method – Batch
9. Transport – FTP to Secure Site
  - 9.1. FTP path is <ftp://col-dceftp/HAVA/NJHAVA/>
  - 9.2. Login(s) provided under separate email.

Data	Max Field Length	Format	Description	Default	CVNS USE ONLY
State Bureau ID					New Data
SSN	9	NNNNNNNNNN			
Date of Birth	8	MM/DD/YYYY			
First Name	50	Alpha			
Middle Name	50	Alpha			
Last Name	50	Alpha			
Street Number	25	A/N			
Street Name	25	A/N			
Apt/Suit Number	7	A/N			
City	25	Alpha			
State	2	Alpha			
Zip5	5	NNNNN			
Zip4	4	NNNN			
Max P&P Date	8	MM/DD/YYYY			

### *General File Creation Specifications*

10. Filters
  - 10.1. All OL and ID Card holders >= 18 YOA from date of file generation
11. Delimiter - Standard CSV - Comma(,) with " " enclosing address information
12. Regenerate total file for the two submissions (Not an update)

### *File Submission Specifications*

10. Two generations –

## Appendix D – AOC Batch File Specifications and Layout

### *General File Creation Specifications*

#### 13. Filters

13.1. All Convicted Felons

13.2. Alias information, noted by the SBI, will be included

14. Delimiter - Standard CSV - Comma(,) with " " enclosing address information

15. Regenerate total file each submission (Not an update)

### *File Submission Specifications*

11. Monthly

12. Method – Batch

13. Transport – FTP to Secure Site

13.1. FTP path is <ftp://col-dceftp/HAVA/NJHAVA/>

13.2. Login(s) provided under separate email.

Data	Max Field Length	Format	Description	Default	CVNS USE ONLY
State Bureau ID					
SSN	9	NNNNNNNNNN			
Date of Birth	8	MM/DD/YYYY			
First Name	50	Alpha			
Middle Name	50	Alpha			
Last Name	50	Alpha			
Street Number	25	A/N			
Street Name	25	A/N			
Apt/Suit Number	7	A/N			
City	25	Alpha			
State	2	Alpha			
Zip5	5	NNNNN			
Zip4	4	NNNN			